Hi, my name is Janani Ravi and welcome to this course on "Expediting Deep Learning with Transfer Learning: PyTorch Playbook". A little about myself, I have a Masters in EE from Stanford and have worked at companies such as Microsoft, Google and Flipkart. At Google I was one of the first engineers working on real time collaborative editing in Google Docs and I hold 4 patents for its underlying technologies. I currently work on my own startup, Loonycorn, a studio for high quality video content.

Transfer learning refers to the re-use of a trained machine learning model for a similar problem, keeping the model architecture unchanged, but potentially altering the model's weights.

In this course, you will gain the ability to identify the right approach to transfer learning, and implement it using PyTorch.

First, you will learn how different forms of transfer learning - such as inductive, transductive and unsupervised transfer learning - can be applied to different combinations of source and target domains . Next, you will discover how transfer learning solutions leverage the fact that lower layers of pre-trained models typically extract feature information and are data-specific, while later layers tend to be more problem-specific.

Finally, you will explore how to design and implement the correct strategy for freezing and fine-tuning the appropriate layers of your pre-trained model. You will round out the course by seeing various powerful architectures are made available, in pre-trained form, in PyTorch's suite of transfer learning solutions.

When you're finished with this course, you will have the skills and knowledge to choose the right transfer learning approach to your specific problem, and design and implement it using PyTorch.